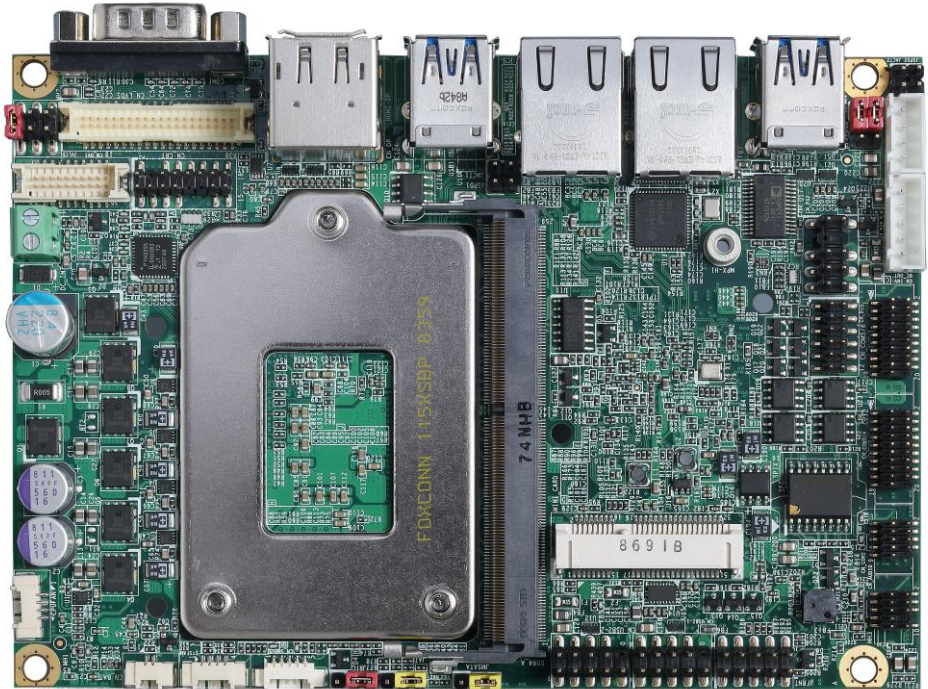


Product Test Report



Product Name	LS-37L
Product Version	A
Issued Date	2019.06.10
Report Edition	1.0
BIOS Version	1.0
Testing Engineer	Perry
Check Engineer	Daniel

REVISION HISTORY

DATE	REVISION NO.	PAGE	DESCRIPTONS
2019.06.10	Ver. 1.0	75	Initial Release

Index

1. Function test.....	3
1.1 Hardware functions	3
1.2 BIOS function	4
1.3 Driver.....	5
2. Compatibility test	6
2.1 CPU Test	6
2.2 Memory Test.....	6
2.3 CRT Graphic Quality Test.....	7
2.4 DVI Graphic Quality Test.....	8
2.5 HDMI Graphic Quality Test.....	8
2.6 Display Port Graphic Quality Test	9
2.7 Audio	10
2.8 HDD Test	11
2.9 DVD-ROM Test.....	12
2.10 USB Test	12
2.11 Serial Port Test	13
2.12 PS2 Keyboard 、 Mouse Test.....	14
2.13 LAN Test.....	14
2.14 Power Supply Test.....	15
2.15 OS Install.....	15
2.16 PCI Express Mini Card.....	16
3. Environmental test	16
3.1 Temperature Test.....	16
3.2 Thermal measurements at various points on the board.....	19
4. Reliability Test	21
4.1 Power Consumption Test	21
5. Performance Test	27
5.1 3D MARK VANTAGE.....	27
5.2 3D MARK 11.....	33
5.3 3D MARK	39
5.4 PC MARK 7 & 8.....	44
5.5 PC MARK10.....	50
5.6 PerformanceTest 9.0	56
5.7 Geekbench 4.....	62
5.8 Cinebench R15.....	68

1. Function test

1.1 Hardware functions

Base Function Test

Item	Description	Result
1	Power Button	PASS
2	Reset	PASS
3	Power LED	PASS
4	HDD LED	PASS
5	CPUFAN	PASS
6	SYSFAN	PASS
7	CN_AUDIO	PASS
8	LAN1(I219)	PASS
9	LAN2(I210)	PASS
10	DDR4_A	PASS
11	CN_SATA3-1/2	PASS
12	USB3 - 1/2/3/4	PASS
13	CN_USB2 - 1/2	PASS
14	COM 1	PASS
15	CN_COM 2/3/4/5/6	PASS
16	PS2	PASS
17	CN_DVI	PASS
18	HDMI	PASS
19	Display Port	PASS
20	CN_CRT	PASS

21	LVDS	PASS
22	MINI_CRAD	PASS

Jumper

Item	Description	Result
1	JRTC	PASS
2	JAT	PASS
3	JVUSB	PASS
4	JMSATA	PASS
5	JVLCD	PASS

1.2 BIOS function

Item	Description	Result	Remark
1	Press 'Del' to run Setup Utility	PASS	
2	Ctrl-Alt-Del – Soft-Reboot	PASS	
3	Save & Exit Setup	PASS	
4	Date & Time Setting	PASS	
5	Selection Language	PASS	
6	Numlock	PASS	
7	Active Processor Cores	PASS	
8	Hyper-Threading	PASS	
9	Channel A&B DIMM Control	PASS	
10	LCD Control	PASS	
11	HD Audio	PASS	
12	Wake On LAN	PASS	
13	LVDS Configuration	PASS	

Item	Description	Result	Remark
14	COM Port 1~6	PASS	
15	Keyboard Controller	PASS	
16	Power Loss	PASS	
17	Watch Dog Timer	PASS	
18	Auto Wake on S5	PASS	
19	iAMT	PASS	

1.3 Driver

CD edition : IPCI2-1.0

1. Windows 10 64 bit Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	
2	VGA Driver	PASS	24.20.100.6194
3	Audio Driver	PASS	6.0.1.8036
4	LAN Driver	PASS	I219LM:12.17.10.7 I210: 12.15.184.0

2. Compatibility test

2.1 CPU Test

Test environment:

OS: Windows 10 64bit

Test program : PC MARK05 & BurnIn Test8.1

Spec	CPU Speed	Family	Processor	MAX TDP	Smart Cache	Result
SR3WX	2.4GHz	CORE	i7-8700T	35W	12 MB	PASS
SR3QS	3.2GHz	CORE	i7-8700	65W	12 MB	PASS
SR3XE	3GHz	CORE	i5-8500	65W	9 MB	PASS
SR3N5	3.6GHz	CORE	i3-8100	65W	6MB	PASS
SR3X9	3.7GHz	Pentium Gold	G5400	58W	4MB	PASS
SR3W4	3.1GHz	Celeron	G4900	54W	2MB	PASS

2.2 Memory Test

Test environment:

OS: Windows 10 64bit

Test program : PC MARK05 & BurnIn Test8.1 & MemTest64
& MemTest86+

Manufacturer	Chip	Frequency	Capacity Mbytes	Memory test Source
Kingston KVR26S19D8/16	SKhynix H5AN8G8NCJR	DDR4 2666	16 GB	PASS
Kingston KVR26S19S8/8	Micron 8BE77D9VPP	DDR4 2666	8 GB	PASS
Kingston KVR24S17S8/8	Micron 7ZE77D9VPP	DDR4 2400	8 GB	PASS

Crucial CT4G4SFS8213.8FA2	Micron 5RA77D9RGQ	DDR4 2133	4 GB	PASS
--------------------------------------	------------------------------	----------------------	-------------	-------------

2.3 CRT Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

Resolution	Color	Result	Remark
800 x 600	32bit	PASS	
1024 x 768	32bit	PASS	
1152 x 864	32bit	PASS	
1280 x 600	32bit	PASS	
1280 x 720	32bit	PASS	
1280 x 768	32bit	PASS	
1280 x 800	32bit	PASS	
1280 x 960	32bit	PASS	
1280 x 1024	32bit	PASS	
1360 x 768	32bit	PASS	
1366 x 768	32bit	PASS	
1400 x 1050	32bit	PASS	
1440 x 900	32bit	PASS	
1600 x 900	32bit	PASS	
1600 x 1200	32bit	PASS	
1680 x 1050	32bit	PASS	
1920 x 1080	32bit	PASS	

2.4 DVI Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

Resolution	Color	Result	Remark
800 x 600	32bit	PASS	
1024 x 768	32bit	PASS	
1152 x 864	32bit	PASS	
1280 x 600	32bit	PASS	
1280 x 720	32bit	PASS	
1280 x 768	32bit	PASS	
1280 x 800	32bit	PASS	
1280 x 960	32bit	PASS	
1280 x 1024	32bit	PASS	
1360 x 768	32bit	PASS	
1366 x 768	32bit	PASS	
1400 x 1050	32bit	PASS	
1440 x 900	32bit	PASS	
1600 x 900	32bit	PASS	
1680 x 1050	32bit	PASS	
1920 x 1080	32bit	PASS	

2.5 HDMI Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

Resolution	Color	Result	Remark
800 x 600	32bit	PASS	
1024 x 768	32bit	PASS	
1152 x 864	32bit	PASS	
1280 x 600	32bit	PASS	
1280 x 720	32bit	PASS	
1280 x 768	32bit	PASS	
1280 x 800	32bit	PASS	
1280 x 960	32bit	PASS	
1280 x 1024	32bit	PASS	
1360 x 768	32bit	PASS	
1366 x 768	32bit	PASS	
1400 x 1050	32bit	PASS	
1440 x 900	32bit	PASS	
1600 x 900	32bit	PASS	
1680 x 1050	32bit	PASS	
1920 x 1080	32bit	PASS	
3840 x 2160	32bit	PASS	

2.6 Display Port Graphic Quality Test

Test environment:

OS Windows 10 64bit

Driver version : 24.20.100.6194

Resolution	Color	Result	Remark
800 x 600	32bit	PASS	
1024 x 768	32bit	PASS	

1152 x 864	32bit	PASS	
1280 x 600	32bit	PASS	
1280 x 720	32bit	PASS	
1280 x 768	32bit	PASS	
1280 x 800	32bit	PASS	
1280 x 960	32bit	PASS	
1280 x 1024	32bit	PASS	
1360 x 768	32bit	PASS	
1366 x 768	32bit	PASS	
1400 x 1050	32bit	PASS	
1440 x 900	32bit	PASS	
1600 x 900	32bit	PASS	
1600 x 1050	32bit	PASS	
1920 x 1080	32bit	PASS	
3840 x 2160	32bit	PASS	

2.7 Audio

Test environment:

OS Windows 10 64-bit

Driver version : 6.0.1.8036

Item	Description	Result	Remark
1	2.1CH	PASS	
2	Microphone	PASS	
3	LINE	PASS	

OS Ubuntu 16.04 / 18.04

Item	Description	Result	Remark
1	2.1CH	PASS	

OS Fedoro 28 Workstation

Item	Description	Result	Remark
1	2.1CH	PASS	

2.8 HDD Test

Test environment:

OS Windows 10 64bit

Test program : PC MARK05 & BurnIn Test8.1 & CrystalDiskMark

HDD Model	Interface	Capacity	HDD Size Detect	HDD Data Transfer	HDD LED Check
INTEL SSDSC2BW240A4	SSD	240 GB	PASS	PASS	PASS
SPCC Solid State disk(S55)	SSD	120 GB	PASS	PASS	PASS
CT120 BX500	SSD	120 GB	PASS	PASS	PASS
WD 10EZEX	HDD	1 TB	PASS	PASS	PASS
Kingston DT100G3/32G	USB	32 GB	PASS	PASS	PASS
Kingston DT Hyper X 3.0	USB	63 GB	PASS	PASS	PASS
Crucial_CT 120M500SSD	mSATA	120 GB	PASS	PASS	PASS
Innodisk 3MV2-P DVMSR-64GD81BC 1QC	mSATA	64 GB	PASS	PASS	PASS

2.9 DVD-ROM Test

Test environment:

OS Windows 10 64bit

DVD-ROM Model	Interface	DVD-ROM Detect	DVD-ROM Data Transfer	Play DVD
PIONEER DVD DVR-219L	SATA	PASS	PASS	PASS
ASUS DRW-2D1ST a	SATA	PASS	PASS	PASS
ASUS DRW-1814BLT	SATA	PASS	PASS	PASS
LITEON iHES312-33 3	SATA	PASS	PASS	PASS
Transcend DVD TS8XDVDS-K	USB	PASS	PASS	PASS
LITEON DVD eTAU108	USB	PASS	PASS	PASS
PIONEER DVD DVR-XD11T	USB	PASS	PASS	PASS
ZYNET GT32N A201	USB	PASS	PASS	PASS

2.10 USB Test

1. Windows 10 64-bit

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	

Hot plugging test	PASS	
DVD-ROM	PASS	
USB Mass storage	PASS	

2. Ubuntu 16.04 / 18.04

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
DVD-ROM	PASS	
USB Mass storage	PASS	

3. Fedoro 28 Workstation

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
DVD-ROM	PASS	
USB Mass storage	PASS	

2.11 Serial Port Test

1. Windows 10 64-bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	

2.12 PS2 Keyboard 、 Mouse Test

1. Windows 10 64-bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

2. Ubuntu 16.04 / 18.04

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

2. Fedoro 28 Workstation

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

2.13 LAN Test

Data Transfer Test environment:

-CAT 6 UTP 100M

-8 HR. continuous

1. Windows 10 64-bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	(IPERF)

2	Data Transfer Test	PASS	(IPERF)
---	--------------------	------	---------

2. Ubuntu 16.04 / 18.04

Item	Description	Result	Remark
1	Device Manager Check	PASS	

3. Fedoro 28 Workstation

Item	Description	Result	Remark
1	Device Manager Check	PASS	

2.14 Power Supply Test

Item	Type	Description	Result	Remark
1	ATX Power	Thermaltake TR2-450AH2NCB	PASS	
2	ATX Power	SEED BS400	PASS	
3	ATX Power	Seasonic SS-520GB 520W	PASS	
4	ATX Power	AcBel PC7008 430W	PASS	

2.15 OS Install

Item	Description	Result	Remark
1	Windows 10 64 bit	PASS	
2	Ubuntu16.04 (ubuntu-16.04.5-desktop-amd64)	PASS	
3	Ubuntu18.04 (ubuntu-18.04.1-desktop-amd64)	PASS	
4	Fedoro 28 (Fedora-Workstation-Live-x86_64-28-1.1)	PASS	

2.16 PCI Express Mini Card

Motherboard	PCI Express mini card	Result	Remark
LS-37L	MPX-210D	PASS	
	MPX-210D2	PASS	
	MPX-574D	PASS	
	MPX-574D2	PASS	

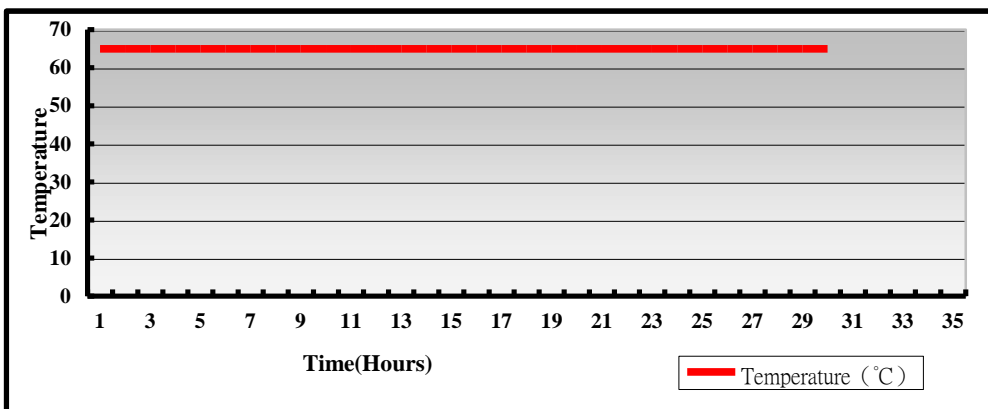
3. Environmental test

3.1 Temperature Test

Hardware Device list:

System Board	LS – 37L
CPU	Intel(R) Core(TM) i7-8700 3.2GHz
Memory	Kingston KVR26S19S8/8 (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB
Operating OS	Windows 10 64bit
Test Equipment	THERMOTRON 2800 Programmer/Controller
Test Program	3DMark06 + Prime95

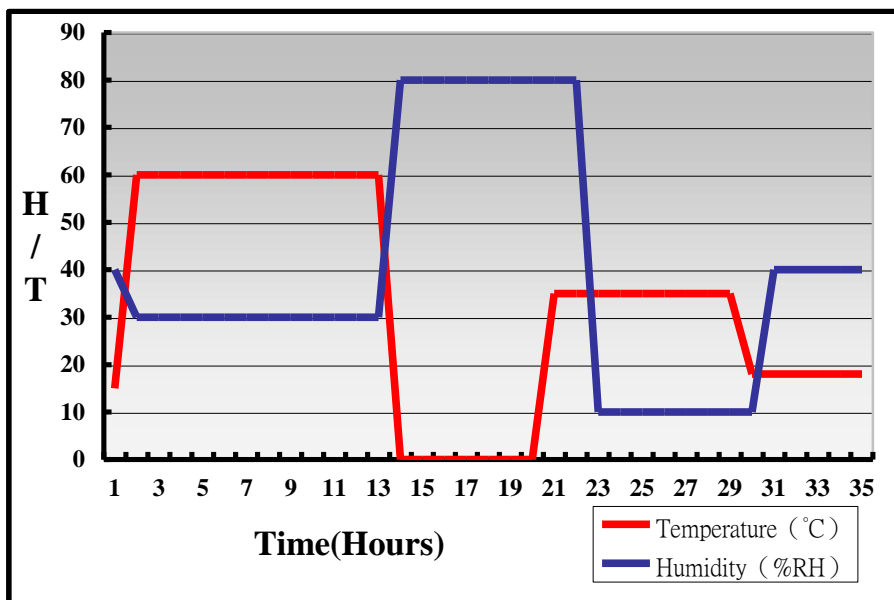
Test Result:



Hardware Device list:

System Board	LS – 37L
CPU	Intel(R) Core(TM) i7-8700 3.2GHz
Memory	Kingston KVR26S19S8/8 (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB
Operating OS	Windows 10 64bit
Test Equipment	THERMOTRON 2800 Programmer/Controller
Test Program	3DMark06 + Prime95

Test Result:



Boot up Test:

Hardware Device list:

System Board	LS-37L
CPU	Intel(R) Core(TM) i7-8700 3.2GHz
Memory	Kingston KVR26S19S8/8 (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB

Temperature	Result	Remark
-40°C	PASS	50 Times
50°C	PASS	50 Times

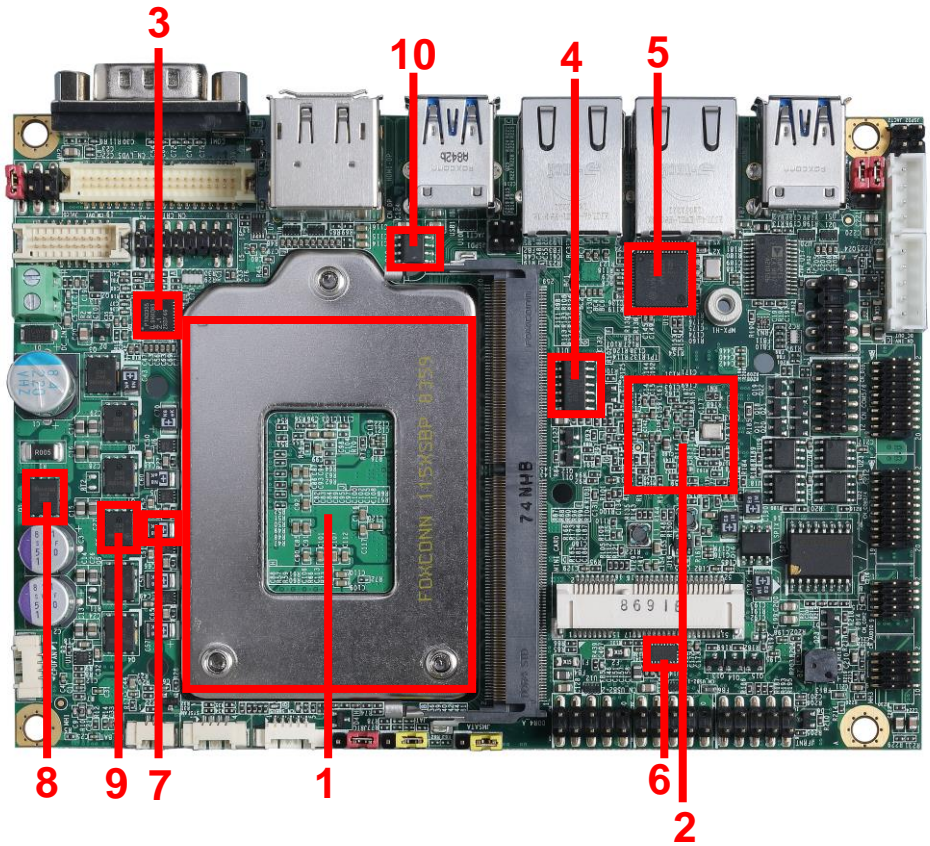
3.2 Thermal measurements at various points on the board

Test Environment:

CPU	Intel(R) Core(TM) i7-8700 3.2GHz
Memory	Kingston KVR26S19S8/8 (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB
Power	Thermaltake TR2-450AH2NCB
Operating System	Windows 10 64-bit
Test Program	3DMARK06+Prime95

Test Result:

Item	Environmental temperature	25°C
1	CPU	66°C
2	PCH (Q370)	52°C
3	U2	58.4°C
4	U11	48.2°C
5	U13	45.4°C
6	U14	46.3°C
7	C59	68.3°C
8	Q1	68.2°C
9	Q6	82.5°C
10	Q10	55.3°C



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	LS-37L
CPU	Intel(R) Core(TM) i7-8700 3.2GHz
Memory	Kingston KVR26S19S8/8 8GB (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB

**Power Supply: GW INSTEK SPS-3610(DC Power Supply)
Thermaltake TR2-450AH2NCB (12V)**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.29	27.48	8.41	100.92
19V	1.44	27.36	4.98	94.62
24V	1.21	29.04	4.04	96.96

1. a. Test Environment:

The same as above but with LCD

Display Panel	LTM170EH-L01 17"LCD
----------------------	----------------------------

**Power Supply: GW INSTEK SPS-3610(DC Power Supply)
Thermaltake R2-450AH2NCB (12V)**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.41	40.92	9.8	117.6
19V	2.1	39.9	5.7	108.3
24V	1.77	42.48	4.5	108

2. Test Environment:

Motherboard	LS-37L
CPU	Intel(R) Core(TM) i5-8500 3.0GHz
Memory	Kingston KVR26S19S8/8 8GB (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.9	22.8	7.28	87.36
19V	1.29	24.51	4.39	83.41
24V	1.03	24.72	3.57	85.68

2. a. Test Environment:

The same as above but with LCD

Display Panel	LTM170EH-L01 17"LCD
----------------------	----------------------------

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.16	37.92	9.27	111.24
19V	2.0	38	5.38	102.22
24V	1.64	39.36	4.14	99.36

3. Test Environment:

Motherboard	LS-37L
CPU	Intel(R) Core(TM) i3-8100 3.6GHz
Memory	Kingston KVR26S19S8/8 8GB (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB

**Power Supply: GW INSTEK SPS-3610(DC Power Supply)
Thermaltake R2-450AH2NCB (12V)**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.58	30.96	6.86	82.32
19V	1.65	31.35	4.0	76
24V	1.26	30.24	3.21	77.04

3. a. Test Environment:

The same as above but with LCD

Display Panel	LTM170EH-L01 17"LCD
----------------------	----------------------------

**Power Supply: GW INSTEK SPS-3610(DC Power Supply)
Thermaltake R2-450AH2NCB (12V)**

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.09	37.08	9.17	110.04
19V	2.03	38.57	5.15	97.85
24V	1.62	38.88	4.14	99.36

4. Test Environment:

Motherboard	LS-37L
CPU	Intel(R) Pentium(R) Gold G5400 3.7GHz
Memory	Kingston KVR26S19S8/8 8GB (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.36	28.32	4.7	56.4
19V	1.58	30.02	2.91	55.29
24V	1.18	28.32	2.32	55.68

4. a. Test Environment:

The same as above but with LCD

Display Panel	LTM170EH-L01 17"LCD
----------------------	----------------------------

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.11	37.32	6.39	76.68
19V	1.95	37.05	3.41	64.79
24V	1.65	39.6	3.07	73.68

5. Test Environment:

Motherboard	LS-37L
CPU	Intel(R) Celeron(R) G4900 3.1GHz
Memory	Kingston KVR26S19S8/8 8GB (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.17	26.04	3.53	42.36
19V	1.41	26.79	2.25	42.75
24V	1.19	28.56	1.89	45.36

5. a. Test Environment:

The same as above but with LCD

Display Panel	LTM170EH-L01 "LCD
----------------------	--------------------------

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.96	35.52	5.25	63
19V	1.93	36.67	3.25	61.75
24V	1.59	38.16	2.6	62.4

6. Test Environment:

Motherboard	LS-37L
CPU	Intel(R) Core(TM) i7-8700T 2.4GHz
Memory	Kingston KVR26S19S8/8 8GB (Micron 8BE77D9VPP)
HDD	INTEL SSDSC2BW240A4 240GB

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.63	19.56	3.95	47.4
19V	1.19	22.61	2.46	46.74
24V	0.92	22.08	1.94	46.56

6. a. Test Environment:

The same as above but with LCD

Display Panel	LTM170EH-L01 "LCD
----------------------	--------------------------

Power Supply: GW INSTEK SPS-3610(DC Power Supply)

Thermaltake R2-450AH2NCB (12V)

Voltage	MS-DOS Boot up		Windows 10 64bit 3DMARK 2006 + Prime95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.82	33.84	5.79	69.48
19V	1.76	33.44	3.54	67.26
24V	1.51	36.24	2.77	66.48

5. Performance Test

5.1 3D MARK VANTAGE

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P7576
2	GPU SCORE		PASS	5963
3	CPU SCORE		PASS	40210

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P7475
2	GPU SCORE		PASS	5882
3	CPU SCORE		PASS	39764

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P7101
2	GPU SCORE		PASS	5628
3	CPU SCORE		PASS	33021

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P7026
2	GPU SCORE		PASS	5566
3	CPU SCORE		PASS	32898

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P6399
2	GPU SCORE		PASS	5197
3	CPU SCORE		PASS	20873

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P6444
2	GPU SCORE		PASS	5236
3	CPU SCORE		PASS	20908

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P4098
2	GPU SCORE		PASS	3315
3	CPU SCORE		PASS	14020

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P4044
2	GPU SCORE		PASS	3268
3	CPU SCORE		PASS	14079

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P3902
2	GPU SCORE		PASS	3291
3	CPU SCORE		PASS	8798

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P3890
2	GPU SCORE		PASS	3283
3	CPU SCORE		PASS	8732

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P7543
2	GPU SCORE		PASS	6040
3	CPU SCORE		PASS	29781

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P7410
2	GPU SCORE		PASS	5924
3	CPU SCORE		PASS	29935

5.2 3D MARK 11

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P2165
2	Graphics SCORE		PASS	1939
3	Physics SCORE		PASS	8105
4	Combined SCORE		PASS	1771

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P2136
2	Graphics SCORE		PASS	1926
3	Physics SCORE		PASS	7858
4	Combined SCORE		PASS	1680

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P2001
2	Graphics SCORE		PASS	1783
3	Physics SCORE		PASS	8071
4	Combined SCORE		PASS	1653

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P1974
2	Graphics SCORE		PASS	1769
3	Physics SCORE		PASS	7802
4	Combined SCORE		PASS	1579

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P1890
2	Graphics SCORE		PASS	1716
3	Physics SCORE		PASS	6327
4	Combined SCORE		PASS	1466

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P1878
2	Graphics SCORE		PASS	1704
3	Physics SCORE		PASS	6373
4	Combined SCORE		PASS	1459

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P1151
2	Graphics SCORE		PASS	1016
3	Physics SCORE		PASS	3887
4	Combined SCORE		PASS	1095

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P1176
2	Graphics SCORE		PASS	1031
3	Physics SCORE		PASS	4807
4	Combined SCORE		PASS	1098

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P1123
2	Graphics SCORE		PASS	1002
3	Physics SCORE		PASS	3177
4	Combined SCORE		PASS	1062

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P1145
2	Graphics SCORE		PASS	1022
3	Physics SCORE		PASS	3246
4	Combined SCORE		PASS	1075

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P2125
2	Graphics SCORE		PASS	1926
3	Physics SCORE		PASS	6739
4	Combined SCORE		PASS	1700

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	3DMARK SCORE	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	P2120
2	Graphics SCORE		PASS	1918
3	Physics SCORE		PASS	7147
4	Combined SCORE		PASS	1678

5.3 3D MARK

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	453
2	Graphics SCORE		PASS	393
3	CPU SCORE		PASS	3749

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	442
2	Graphics SCORE		PASS	383
3	CPU SCORE		PASS	3656

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	424
2	Graphics SCORE		PASS	368
3	CPU SCORE		PASS	3408

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	416
2	Graphics SCORE		PASS	361
3	CPU SCORE		PASS	3284

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	403
2	Graphics SCORE		PASS	350
3	CPU SCORE		PASS	2844

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	402
2	Graphics SCORE		PASS	350
3	CPU SCORE		PASS	2835

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	242
2	Graphics SCORE		PASS	210
3	CPU SCORE		PASS	2125

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	245
2	Graphics SCORE		PASS	212
3	CPU SCORE		PASS	2205

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	452
2	Graphics SCORE		PASS	393
3	CPU SCORE		PASS	3322

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	Time Spy	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	444
2	Graphics SCORE		PASS	386
3	CPU SCORE		PASS	3233

5.4 PC MARK 7 & 8

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8	PASS	6688
PCMARK 8 Scores	2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	4066

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR24S17S8/8	PASS	6603
PCMARK 8 Scores	2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	4062

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8	PASS	6228
PCMARK 8 Scores	2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	5520

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8	PASS	6139
PCMARK 8 Scores	2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	5304

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8	PASS	6158
PCMARK 8 Scores	2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	5310

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8	PASS	6147
PCMARK 8 Scores	2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	5327

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8	PASS	5717
PCMARK 8 Scores	2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	4727

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8	PASS	5732
PCMARK 8 Scores	2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	4988

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26S19S8/8	PASS	5255
PCMARK 8 Scores	2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	4533

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR24S17S8/8	PASS	5047
PCMARK 8 Scores	2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	4505

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8	PASS	6418
PCMARK 8 Scores	2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	5522

Windows 10 64-bit

Weighted Suite	Test Environment	Result	Remark
PCMARK 7 Scores	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8	PASS	6055
PCMARK 8 Scores	2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	5467

5.5 PC MARK10

Test Environment
Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	4291
2	Essentials	PASS	8578
3	Productivity	PASS	7144
4	Digital Content Creation	PASS	3499

Test Environment
Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	3991
2	Essentials	PASS	7805
3	Productivity	PASS	6713
4	Digital Content Creation	PASS	3294

Test Environment
Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	4013
2	Essentials	PASS	7999
3	Productivity	PASS	6700
4	Digital Content Creation	PASS	3275

Test Environment
Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	3666
2	Essentials	PASS	7496
3	Productivity	PASS	6264
4	Digital Content Creation	PASS	2849

Test Environment
Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	3678
2	Essentials	PASS	7484
3	Productivity	PASS	6292
4	Digital Content Creation	PASS	2868

Test Environment
Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	3246
2	Essentials	PASS	7318
3	Productivity	PASS	6199
4	Digital Content Creation	PASS	2047

Test Environment
Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	3237
2	Essentials	PASS	7385
3	Productivity	PASS	6115
4	Digital Content Creation	PASS	2040

Test Environment
Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	2656
2	Essentials	PASS	5678
3	Productivity	PASS	5116
4	Digital Content Creation	PASS	1752

Test Environment
Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	2718
2	Essentials	PASS	5950
3	Productivity	PASS	5214
4	Digital Content Creation	PASS	1758

Test Environment
Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	3897
2	Essentials	PASS	7775
3	Productivity	PASS	6589
4	Digital Content Creation	PASS	3136

Test Environment
Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Scores	PASS	3947
2	Essentials	PASS	8154
3	Productivity	PASS	6521
4	Digital Content Creation	PASS	3139

5.6 PerformanceTest 9.0

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	3864.0
2	CPU Mark		PASS	12442.0
3	2D Graphics Mark		PASS	884.6
4	3D Graphics Mark		PASS	1086.4
5	Memory Mark		PASS	2486.7
6	Disk Mark		PASS	4212.5

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	3802.2
2	CPU Mark		PASS	12227.3
3	2D Graphics Mark		PASS	910.4
4	3D Graphics Mark		PASS	1050.2
5	Memory Mark		PASS	2329.1
6	Disk Mark		PASS	4227.2

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	2755.3
2	CPU Mark		PASS	11335.8
3	2D Graphics Mark		PASS	903.1
4	3D Graphics Mark		PASS	1029.2
5	Memory Mark		PASS	2392.2
6	Disk Mark		PASS	4345.8

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	3703.9
2	CPU Mark		PASS	11346.9
3	2D Graphics Mark		PASS	911.8
4	3D Graphics Mark		PASS	999.4
5	Memory Mark		PASS	2292.6
6	Disk Mark		PASS	4338.9

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	3324.7
2	CPU Mark		PASS	8063.7
3	2D Graphics Mark		PASS	824.2
4	3D Graphics Mark		PASS	956.6
5	Memory Mark		PASS	2232.6
6	Disk Mark		PASS	4263.8

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	3326.1
2	CPU Mark		PASS	8145.4
3	2D Graphics Mark		PASS	821.7
4	3D Graphics Mark		PASS	955.7
5	Memory Mark		PASS	2207.1
6	Disk Mark		PASS	4325.8

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	2718.4
2	CPU Mark		PASS	5161.2
3	2D Graphics Mark		PASS	791.8
4	3D Graphics Mark		PASS	714.7
5	Memory Mark		PASS	2187.2
6	Disk Mark		PASS	4308.5

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	2713.1
2	CPU Mark		PASS	5203.0
3	2D Graphics Mark		PASS	781.7
4	3D Graphics Mark		PASS	713.9
5	Memory Mark		PASS	2178.4
6	Disk Mark		PASS	4285.5

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	2286.0
2	CPU Mark		PASS	3391.4
3	2D Graphics Mark		PASS	699.3
4	3D Graphics Mark		PASS	688.4
5	Memory Mark		PASS	2039.7
6	Disk Mark		PASS	4295.8

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	2280.9
2	CPU Mark		PASS	3383.1
3	2D Graphics Mark		PASS	701.9
4	3D Graphics Mark		PASS	688.0
5	Memory Mark		PASS	2042.9
6	Disk Mark		PASS	4151.9

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	3685.9
2	CPU Mark		PASS	10550.6
3	2D Graphics Mark		PASS	830.8
4	3D Graphics Mark		PASS	1092.3
5	Memory Mark		PASS	2381.3
6	Disk Mark		PASS	4366.1

Windows 10 64-bit

Item	Weighted Suite	Test Environment	Result	Remark
1	PassMark Rating	Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB	PASS	3608.3
2	CPU Mark		PASS	10303.3
3	2D Graphics Mark		PASS	546.3
4	3D Graphics Mark		PASS	1055.3
5	Memory Mark		PASS	2244.0
6	Disk Mark		PASS	4270.4

5.7 Geekbench 4

Test Environment
Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	5071
		Multi-core		17346
2	Run Compute Benchmark (OpenCL Score)		PASS	32178

Test Environment
Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	5055
		Multi-core		17586
2	Run Compute Benchmark (OpenCL Score)		PASS	31606

Test Environment
Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4724
		Multi-core		17811
2	Run Compute Benchmark (OpenCL Score)		PASS	30789

Test Environment
Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4662
		Multi-core		17176
2	Run Compute Benchmark (OpenCL Score)		PASS	30649

Test Environment
Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4330
		Multi-core		11870
2	Run Compute Benchmark (OpenCL Score)		PASS	30014

Test Environment
Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4310
		Multi-core		12583
2	Run Compute Benchmark (OpenCL Score)		PASS	30396

Test Environment
Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4188
		Multi-core		8159
2	Run Compute Benchmark (OpenCL Score)		PASS	22653

Test Environment
Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4186
		Multi-core		8126
2	Run Compute Benchmark (OpenCL Score)		PASS	22634

Test Environment
Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	3383
		Multi-core		5997
2	Run Compute Benchmark (OpenCL Score)		PASS	21547

Test Environment
Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	3577
		Multi-core		6005
2	Run Compute Benchmark (OpenCL Score)		PASS	22348

Test Environment
Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4761
		Multi-core		14513
2	Run Compute Benchmark (OpenCL Score)		PASS	30324

Test Environment
Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite		Result	Remark
1	Run CPU Benchmark Score	Single-core	PASS	4695
		Multi-core		14861
2	Run Compute Benchmark (OpenCL Score)		PASS	30310

5.8 Cinebench R15

Test Environment
Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	55.57 fps
2	CPU	PASS	1098 cb

Test Environment
Intel(R) Core(TM) i7-8700 3.2GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	52.49 fps
2	CPU	PASS	1106 cb

Test Environment
Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	52.71 fps
2	CPU	PASS	923 cb

Test Environment
Intel(R) Core(TM) i5-8500 3.0GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	50.67 fps
2	CPU	PASS	912 cb

Test Environment
Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	47.47 fps
2	CPU	PASS	585 Cb

Test Environment
Intel(R) Core(TM) i3-8100 3.6GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	47.50 fps
2	CPU	PASS	589 cb

Test Environment
Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	32.06 fps
2	CPU	PASS	398 cb

Test Environment
Intel(R) Pentium(R) Gold G5400 3.7GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	32.11 fps
2	CPU	PASS	399 cb

Test Environment
Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	31.27 fps
2	CPU	PASS	245 cb

Test Environment
Intel(R) Celeron(R) G4900 3.1GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	31.41 fps
2	CPU	PASS	247 cb

Test Environment
Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR26S19S8/8 2666 8GB (Micron 8BE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	54.99 fps
2	CPU	PASS	811 cb

Test Environment
Intel(R) Core(TM) i7-8700T 2.4GHz Kingston KVR24S17S8/8 2400 8GB (Micron 7ZE77D9VPP) INTEL SSDSC2BW240A4 240GB

Windows 10 64-bit

Item	Weighted Suite	Result	Remark
1	OpenGL	PASS	53.40 fps
2	CPU	PASS	817 cb

5.9 Storage Performance

5.9.1 HDD

Test environment:

OS Windows 10 64bit

Program: HD Tune

HDD Model	Interface	Capacity	Average	Burst Rate	Access Time
INTEL SSDSC2BW240A4	SSD	240 GB	315.3 MB/sec	293.3 MB/sec	0.213 ms
SPCC Solid State disk(S55)	SSD	120 GB	179.6 MB/sec	95.0 MB/sec	0.054 ms
CT120 BX500	SSD	120 GB	324.2 MB/sec	151.1 MB/sec	0.059 ms
WDS250G2B0A	SSD	250 GB	319.8 MB/sec	83.4 MB/sec	0.175 ms
Kingston SV300S37A	SSD	240 GB	241.2 MB/sec	138.6 MB/sec	0.155 ms
Kingston DT100G3/32G	USB	32 GB	90.8 MB/sec	35.8 MB/sec	0.280 ms
ADATA UV128/16GB	USB	16 GB	252.9 MB/sec	236.5 MB/sec	0.183 ms
Acpi CSC064GR5-G710A00D	mSATA	64 GB	301.7 MB/sec	41.0 MB/sec	0.060 ms
Crucial_CT 120M500SSD	mSATA	120 GB	269.3 MB/sec	226.6 MB/sec	0.129 ms
Innodisk 3MV2-P DVMSR-64GD81BC1QC	mSATA	64 GB	302.9 MB/sec	281.9 MB/sec	0.050 ms

5.9.2 DVD-ROM

Test environment:

OS Windows 10 64bit

Program (NERO)

DVD-ROM Model	Interface	Average Speed	Full Read	Burst Rate	DVD
PIONEER DVD DVR-219L	SATA	11.50x	195 ms	42 MB/s	1 - 16 x
ASUS DRW-2D1ST a	SATA	11.3 x	220 ms	35 MB/s	1 - 16 x
ASUS DRW-1814BLT	SATA	8.49 x	181 ms	42 MB/s	1 - 16 x
LITEON iHES312-33 3	SATA	11.29 x	156 ms	37 MB/s	1 - 16 x
Transcend DVD TS8XDVDS-K	USB	2.86 x	308 ms	14 MB/s	1 - 16 x
LITEON DVD eTAU108	USB	5.57 x	208 ms	18 MB/s	1 - 16 x
PIONEER DVD DVR-XD11T	USB	5.80 x	181 ms	20 MB/s	1 - 16 x
ZYNET GT32N A201	USB	5.70 x	213 ms	20 MB/s	1 - 16 x